The Bureau of Reclamation - Lower Colorado River Multi-Species Conservation Program Comments to the Proposed Listing of the Western Distinct Population Segment of the Yellow-billed Cuckoo

As stated in the Incremental Effects Memorandum, dated June 19, 2013, the U.S. Fish and Wildlife Service (Service) is considering the exclusion of the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) planning area from critical habitat designation under Section 4(b)(2) of the Endangered Species Act. It is our firm belief that the conservation measures described in the LCR MSCP Habitat Conservation Program (LCRMSCP 2004) provide protection and benefits to this species that outweigh the benefits of including critical habitat within the LCR MSCP planning area.

The Bureau of Reclamation (Reclamation), as implementing agency for the LCR MSCP, has also reviewed the listing proposal for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*). Comments are attached, along with supporting documentation.

Additional data on LCR MSCP Conservation Areas

Reclamation, under the auspices of the LCR MSCP, has been surveying for yellow-billed cuckoos on the lower Colorado River (LCR) and its tributaries since 2005 (Figure 1). Yellow-billed cuckoos have been documented nesting in habitat at several restoration sites created under the LCR MSCP as well as other habitat areas between southern Nevada and the Southerly International Boundary with Mexico.

Approximately 2,215 acres of cottonwood-willow and mesquite habitat have been created along the LCR specifically targeting yellow-billed cuckoos (Table 1) and additional sites are currently under construction or in the planning stages (LCR MSCP 2013a). The LCR MSCP will ultimately create at least 5,940 acres of cottonwood-willow habitat and 1,320 acres of honey mesquite. A mosaic of these habitat types in patches of at least 25 acres and totaling at least 4,050 acres will be created and managed for this species (LCR MSCP 2004).

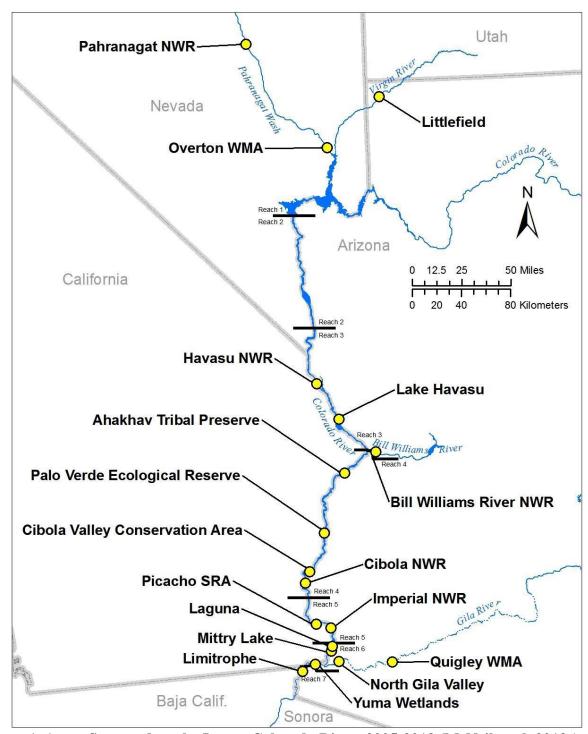


Figure 1. Areas Surveyed on the Lower Colorado River, 2005-2013 (McNeil et al. 2013c)

Table 1. Created Cottonwood, Willow and Mesquite Habitat, LCR MSCP, 2005-2013.

Conservation Area	Riparian Habitat (Cottonwood/Willow/Mesquite Mosaic) (ac)
E1: Beal Lake Riparian Restoration (AZ)	116
E4: Palo Verde Ecological Reserve (CA)	1021
E5: Cibola Valley Conservation Area (AZ)	670
E24: Cibola NWR (AZ)	364
E31: Hunters Hole (AZ)	44
Total	2215

Specific comments on proposed threatened status of western distinct population segment of the yellow-billed cuckoo

- 1. The Proposed Rule includes data from surveys on the lower Colorado River through 2011. Additional data from 2012 and 2013 is now available in the following reports, which can be found at www.lcrmscp.gov: (see Technical Reports tab on the left and Steering Committee tab along the top of the home page)
- McNeil, S.E., D. Tracy, J.R. Stanek, and J.E. Stanek. 2013. Yellow-billed cuckoo distribution, abundance and habitat use on the lower Colorado River and tributaries, 2012 annual report. Bureau of Reclamation, Multi-Species Conservation Program, Boulder City, NV, prepared by Southern Sierra Research Station.
- McNeil, S.E., D. Tracy, J.R. Stanek, and J.E. Stanek. 2013. Yellow-billed cuckoo distribution, abundance and habitat use on the lower Colorado River and tributaries, 2013 annual report. Bureau of Reclamation, Multi-Species Conservation Program, Boulder City, NV, prepared by Southern Sierra Research Station.
- McNeil, S.E., D. Tracy, J.R. Stanek, and J.E. Stanek. 2013. Yellow-billed cuckoo distribution, abundance and habitat use on the lower Colorado River and tributaries, 2008-2012 Summary Report. Bureau of Reclamation, Multi-Species Conservation Program, Boulder City, NV, prepared by Southern Sierra Research Station.

2. There is little discussion in the Proposed Rule of the various estimations of population abundance, number of pairs, and breeding territories. Methods of collecting data and reporting results on these parameters vary throughout the literature, including within the study conducted on the LCR from 2008-2012. The following (from McNeil et al. 2013c, pp. 67-69) discusses this issue:

In the past, cuckoo gender and breeding status were presumed, based on vocal response type, and population estimates were largely derived from call broadcast survey results often coupled with nesting observations (Gaines 1974, Halterman 1991, Laymon et al. 1997). However, later research raises questions about the underlying vocalization assumptions (Wilson 2000, Halterman 2009, SSRS unpublished data), and the omission of factors such as varying detection probabilities, polyandry, within-patch movement, and within-season emigration or immigration, adds uncertainty to historical population estimates (Williams et al. 2002). The estimation of breeding pair or population abundance is complicated by difficulties locating nests, as well as detecting, capturing and uniquely identifying cuckoos, the polyandrous behavior of some females, and a cuckoo's ability to have multiple broods per season. Without overcoming these obstacles, cuckoo breeding pair or population estimates will remain clouded with uncertainty. In light of these difficulties, we have developed alternate methods to estimate breeding territory abundance (McNeil et al. 2010, 2011, 2012). In contrast to breeding pair or population abundance, breeding territory estimates do not require knowing the identity of each adult or the parentage of each nest.

For clarification, from 2008 to 2012 our definition for Possible Breeding Territory (POS) evolved with increasing knowledge of cuckoo behavior and changes to our survey periods (Table 3) (McNeil et al. 2012, 2013a, 2013b, 2013c). All observations reported in McNeil from 2008 to 2012 were evaluated to conform to the present definition, resulting in minor changes to previous breeding territory estimates.

It is important to note that the territory counts are used to estimate the number of breeding territories, not the number of breeding pairs. A territory represents the adults associated with a single nest, usually two adults. However, females have been observed leaving a nest before young have fledged (McNeil et al. 2011, 2013 in review). Females can be polyandrous and after leaving one nest, they may re-nest with another male (Halterman 2009). Also, following a successful or failed nest, one or both parents may re-nest; calling a second nesting attempt an additional pair could be inaccurate.

Table 3.—LCR YBCU survey period dates 2008–2012. 2008–2010 surveys were conducted every 12-20 days. 2011-2012 surveys were conducted every 10–12 days Between years, survey period dates changed due to recommendations by the western cuckoo working group (2008–2009) and to assess protocol efficacy (2010–2011). For the 5-year analysis period (2008-2012), 2008, 2011, and 2012 surveys were reassigned based on the

2009–2010 survey periods (McNeil et al. 2013c).

Survey period	2008	2009–2010	2011–2012
1	June 4 to June 30	June 15 to June 30	June 15 to June 30
2	July 1 to July 21	July 1 to July 15	July 1 to July 10
3	July 22 to August 11	July 16 to July 31	July 11 to July 21
4	August 12 to	August 1 to August	July 21 to July 31
	September 2	15	
5	September 3 to	August 16 to	August 1 to August
	September 22	August 31	15

Table 2. Definitions of Terms Used to Describe Breeding Territory and Population Estimates (McNeil 2013c).

Estimation Type	Term	Definition
Breeding Territory Estimation	Possible Breeding Territory (POS)	Two or more total detections in an area during two survey periods and at least 10 days apart. For example, within a certain area one detection made during survey period two coupled with another cuckoo detection made 10 days later during survey period three warrant a POS territory designation.
	Probable Breeding Territory (PRB)	POS territory, plus cuckoos observed traveling as a pair, exchanging vocalizations, carrying food, or displaying distraction behaviors.
	Confirmed Breeding Territory (COB)	Observation of copulation, stick carry, nest, or fledgling.
Population Estimation	Minimum Territory Estimate	The observed number of confirmed breeding territories (COB).
	Maximum Territory Estimate	The sum of possible (POS), probable (PRB), and confirmed (COB) breeding territories.

- 3. In the Proposed Rule, pair numbers and population estimates are included from the literature when available, but information on survey protocol methods used for each are not. The terms "survey effort", "protocol level surveys," and "revised survey protocols" are used with no definitions or citations provided. Revised from what, for example? Protocols used to gather the data should be included or cited as it is not clear if they were standardized.
- 4. As a reference for future documents (protocols, recovery plans, critical habitat designation) the following information should be included in the Proposed Rule: Vocalizations and tails spots were identified in the past as a method for determining sex of cuckoos. This technique has since been cited in the literature, for example in Hughes (1999) and Sibley (2001), and cuckoos identified to sex using this method may have been reported in survey results and used for pair estimations. A review of the original documents (Laymon and Halterman 1985 and Laymon and Williams 1999) that introduced this method determined that conclusions were based on assumptions rather than data from marked, known sexed birds. Further research by Halterman (2009) on a marked population and using genetic markers to positively identify cuckoos to sex were correlated to various calls. It was determined that neither vocalizations nor tail spots can differentiate between the sexes in the field, and morphometric measurements of captured birds have too much overlap to be definitive.
- 5. The only charts provided for a visual representation of declines are from the Sacramento River in California. Other graphics, etc. from more recent survey efforts are available and should also be included i.e. New Mexico, Arizona, lower Colorado River surveys.
- 6. Page 61664 under Peer Review: states "The purpose of peer review is to ensure that our *critical habitat designation* is based on scientifically sound data, assumptions and analysis." Is this correct or should it refer to the proposed threatened status rule rather than critical habitat?

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